



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,575	11/27/2001	Curtis Hastings	SURR.78	7303

25871 7590 10/03/2003

SWANSON & BRATSCHUN L.L.C.
1745 SHEA CENTER DRIVE
SUITE 330
HIGHLANDS RANCH, CO 80129

EXAMINER

KALIVODA, CHRISTOPHER M

ART UNIT	PAPER NUMBER
----------	--------------

2881

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,575

Applicant(s)

HASTINGS, CURTIS

Examiner

Christopher M. Kalivoda

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-16 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-16 and 18-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2881

DETAILED ACTION

Response to Arguments

Applicant's arguments, see paper No. 7, filed July 14, 2003 with respect to claims 1-22 have been fully considered and are persuasive. The rejection of claims 1-22 has been withdrawn. In an effort to supply the best available art to the Applicant, the following new rejections are now made.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Townsend et al., U.S. Patent Application 2002/0102610. Regarding independent claims 1 and 12 as claimed, Townsend, et al. teach an automated method for characterizing a sample comprising obtaining a chromatogram wherein the mass spectra are generated by chromatography (para 0051, lines 1-7) and applying a median filter to filter noise (para 0057, lines 1-6) to produce a chromatogram.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 11, 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend et al., U.S. Patent Application 2002/0102610.

Regarding dependent claims 4 and 15, Townsend, et al. teaches the method of claims 1 and 12 as described above. While a moving median filter is not specifically mentioned, the inventors teach applying a median filter to smooth the data (para 0057, lines 1-6). The filter uses at least three points and is applied to the intensity values (all values) so a moving filter is implied.

Regarding dependent claims 11 and 22, Townsend, et al. teaches the method of claims 1 and 12 as described above. While liquid chromatography is not specifically mentioned, the inventors teach the method can be used using known chromatographic methods (para 0051, lines 1-7) and liquid chromatography is well known.

Dependent claims 2, 3, 5, 7 -10, 13, 14, 16 and 18 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend et al., U.S. Patent Application 2002/0102610 in view of McLafferty et al. U.S. Patent 3,997,298. Townsend et al.

Art Unit: 2881

teaches the limitations of claim 1 and 12 as described above. However, the reference is silent with respect to the chromatogram being a total ion chromatogram and the applying the filter to the chromatogram to produce a filtered total ion chromatogram. It is also silent with respect to generating individual chromatograms wherein the median filter is applied to the individual chromatograms and performing a component detection analysis as well as using a modified median filter and selecting scan rates and peaks.

McLafferty et al. describes a Liquid Chromatograph-Mass Spectrometer system (LC-MS) used for studying an unknown mixture in which a computer displays a total ion current (col 7, lines 5-9). Furthermore, McLafferty teaches mass spectra are repetitively collected during the LC runs (col 7, lines 1-5).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to apply the median filter to a total ion chromatogram for component analysis. It would also have been obvious to one skilled in the art at the time the invention was made to apply the median filter to the individual chromatograms as well use a modified median filter and select scan rates accordingly. The median filter is used as a data smoothing tool and one skilled in the art recognizes the possible use of any data smoothing tool on data or subsets of the data.

The motivation for such improvements would be to simplify peak detection (col 7, lines 5-8).

Art Unit: 2881


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (703)-305-7443. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (703)-308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9318 for regular communications and (703)-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

cmk
September 17, 2003



JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800